

## ABSTRACT

To a polycrystalline silicon layer crystallized by irradiation with laser light, a mixed gas comprised of ozone gas and  $H_2O$  or  $N_2O$  gas is fed at a processing temperature of  $500^\circ C$  or below, or the polycrystalline silicon layer is previously treated with a solution such as ozone water or an aqueous  $NH_3$ /hydrogen peroxide solution, followed by oxidation treatment with ozone, to form a silicon oxide layer of 4 nm or more thick at the surface of the polycrystalline silicon layer for forming a thin-film transistor having less variations of characteristics on an unannealed glass substrate.